DECLARATION OF ERNEST F. SANDERS UNDER 37 C.F.R. §1.132

I, Ernest F. Sanders, declare as follows:

I am a U.S. citizen, and I presently reside at 16 Regatta Bay Court, Lake St. Louis, MO 63367. I am an inventor of the subject matter of European Patent Application Serial No. 01 988 407.1 - 1219, the patentability of which is presently at issue.

For the past twenty-four years I have been an employee of the Monsanto Company. For the past six years, I have served in my present position as Program Director Seed Enhancement Technology. Prior to that, I served in the areas of technology portfolio management, pesticide development and use practices, and herbicide development. Before joining the Monsanto Company, I earned B.S. degrees in Agricultural Science from the University of Tennessee, Martin, TN, and in Chemistry from the University of Memphis, Memphis, TN.

In order to reach the opinions that I present below, I have reviewed European Patent Application Serial No. 01 988 407.1 – 1219 (the patent application at issue), the Communication Pursuant to Article 96(2) EPC that was issued on February 20, 2004, and data provided by the Monsanto Company that is discussed below.

After considering this material, it is my opinion that evidence shows that seeds treated with silthiofam demonstrate a higher yield than seeds not treated with silthiofam whether or not the treated seeds are also treated with an inoculant.

The following reasons form the basis for that opinion.

Report of soybean yield in 17 U.S. field trials:

Soybeans of the same variety (Asgrow AG3302, available from Monsanto Company, St. Louis, MO) were planted in 17 separate sites in the United States. Planting, chemical treatment and tillage conditions were the same or very similar for each site. At each site, soybeans having the following treatments were planted, grown and harvested:

(1) untreated control,

(2) treated with silthiofam (available from Monsanto Company, St. Louis, MO) at the rate of 12.5 grams/ 100 kg of seed (0.2 oz/acre; 0.5X rate),

(3) treated with silthiofam at the rate of 25 grams/ 100 kg of seed (0.4 oz/acre; 1X rate),

(4) treated with silthiofam at 1X rate plus fungicide (Apron/Maxx®, available from Syngenta Crop Protection, Inc., Greensboro, NC) at label-recommended rates,

(5) treated with silthiofam at 0.5 X rate plus inoculant (the inoculant was Rhizobium available from the Lipha Tech Company, Milwaukee, WI, and was applied to the seed at a rate of 2.8 oz per 100 lbs of seed).

(6) treated with silthiofam at 1X rate plus inoculant, and

(7) treated with silthiofam at 1X rate plus fungicide (Apron/Maxx®) at label-recommended rates plus inoculant.

Treated and untreated seeds were planted and harvested and the soybean yield was recorded for each of the 17 sites. Figure 1 shows the percent yield increase for each of the field sites over the yield of the untreated control for the seeds having no inoculant. It is seen that of the 51 seed/treatment/site combinations, 29, or 57%, showed increased yield over the untreated control. Figure 2 shows the percent yield increase for each of the field sites over the yield of the untreated control for the seeds having treatment with an inoculant in addition to treatment with silthiofam. In this case, 27 of the 51 seed/treatment/site combinations, or 53%, showed increased yield over the untreated control. It is believed, therefore, that the data show that soybean seed treated with silthiofam demonstrate an increase in yield whether or not they also receive treatment with an inoculant.

Report of soybean yield in 37 U.S. and Europe field trials:

Soybeans of the appropriate variety for the location were planted in 37 separate sites in the United States and Europe. Planting, chemical treatment and tillage conditions were the same or very similar for each site. At each site, soybeans having the following treatments were planted, grown and harvested:

(1) untreated control,

(2) treated with silthiofam (MON65500) at the rate of 0.2 oz/acre (0.5X rate),

(3) treated with silthiofam (MON65500) at the rate of 0.4 oz/acre (1X rate),

(4) treated with fungicide (Apron/Maxx®) at the label recommended rate,

(5) treated with silthiofam (MON65500) at 1X rate plus fungicide (Apron/Maxx®) at label-recommended rates,

(6) treated with silthiofam (MON65500) at 0.5 X rate plus inoculant,

(7) treated with silthiofam (MON65500) at 1X rate plus inoculant,

(8) treated with silthiofam (MON65500) plus fungicide (Apron/Maxx®) at the label recommended rate plus inoculant.

(9) treated with silthiofam (MON65500) at 1X rate plus fungicide (Apron/Maxx®) at label-recommended rate plus inoculant.

Treated and untreated seeds were planted and harvested and the soybean yield was recorded for each of the 37 sites. Figure 3 shows the average of the increased soybean yield (in percent) over untreated control for each of the four different seed treatments with and without presence of the inoculant for the 37 field sites. It is seen that seeds treated with silthiofam (MON65500) at both 0.5X and 1X rates gave improved yield over the untreated control, and that the presence of the inoculant appeared to further increase the yield. It is believed, therefore, that these data show that soybean seed treated with silthiofam demonstrate an increase in yield whether or not they also receive treatment with an inoculant, but that the presence of an inoculant can further improve the yield.

I declare that all statements herein made of my own knowledge are true and that all statements made herein on information and belief are believed to be true. I do hereby state that I am aware that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. §1001) and may jeopardize the validity of the application or any patent issuing thereon.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on: June 16, 2004 (Date)

Signature: Ernest F. Sanders

Ernest F. Sanders

ERNIE F SANDERS
16 Regatta Bay Ct
Lake Saint Louis, Mo. 63367

EXPERIENCE

Jan 1980 to Present: Monsanto Company

1998 to present **Monsanto Company** **St Louis, Mo**

Program Director Seed Enhancement Technology

- Build a world-class seed treatment team at Monsanto and lead that team to develop new products. Team objectives are that Monsanto will have the best germplasm, chemistry, and traits combination in the marketplace.
- Worked with transgenic corn rootworm team to develop technical leadership for successful launch of Yieldgard Rootworm product.
- Extensive work with other companies in the industry through collaborative agreement.
- Key learning from interactions with Seed Manufacturing, Production Research Leadership Team, and field Technical Development
- Technical leader for global insecticide seed treatment strategy. Field trials established in Brazil, Mexico, Argentina, US and Europe.
- Clear understanding and impact of seed testing for cold germination as it relates to seed production and seed quality.
- Actively patenting several discoveries with polymer coatings, chemistry synergy interactions with traits and cold tolerance.
- Managed a budget and personal development goals for all team members
- International travel and cooperative projects with global seed and chemistry teams

1996 to 1998 **Monsanto Company** **St. Louis, MO**

Portfolio Management for Technology

- Established a portfolio database and project review for all of technology. Co-lead for this project.
- Extensive interviews with all of technology team leads to understand and help value the technology within Monsanto.
- Created project values, probability of success and clear understanding of near term and longer team projects with technical and regulatory hurdles.

1993 to1996 Monsanto Company

Information Manger for ULUR

- Ultra Low Use Rate (ULUR) team was created to revolutionize chemistry discovery. Screening for new products went from 12,000 compounds per year to nearly 1 million compounds per year. I designed and managed the screening process, the data management and lead areas of chemistry that was generated.
- Integration of chemistry, lab screening data, and greenhouse results was used to move projects forward in the discovery effort.

1988-1992 Stress and Disease Biochemistry

- Acetanilide projects for "Less Stress, More Yield" campaign.
- Analytical chemistry efforts for plant hormone and plant defense mechanisms. (Glutathione, cysteine, tocopherols, etc.).

1985 to1987 Monsanto Co. Manager Compound Acquisition Program

- Acquired chemistry from over 125 different companies and University Professors to screen in Monsanto herbicide, fungicide, and insecticide screens. A diverse range of people, personalities, and locations required me to adapt to new and challenging environments.
- Managed a database of contracts and worked with attorneys

1980 to 1985 Monsanto Company St. Louis, MO

Screening Lead for Herbicide Discovery and PGR Research

- Developed new screening procedures for herbicide and plant growth regulator research.
- Interfaced with synthesis chemists to develop strategy to optimize desired biological response for herbicides and PGR's

EDUCATION

1977 to 1979; B.S. Chemistry; University of Memphis, Memphis, TN

1973 to 1977; B.S. Agricultural Science; University of Tennessee, Martin, TN

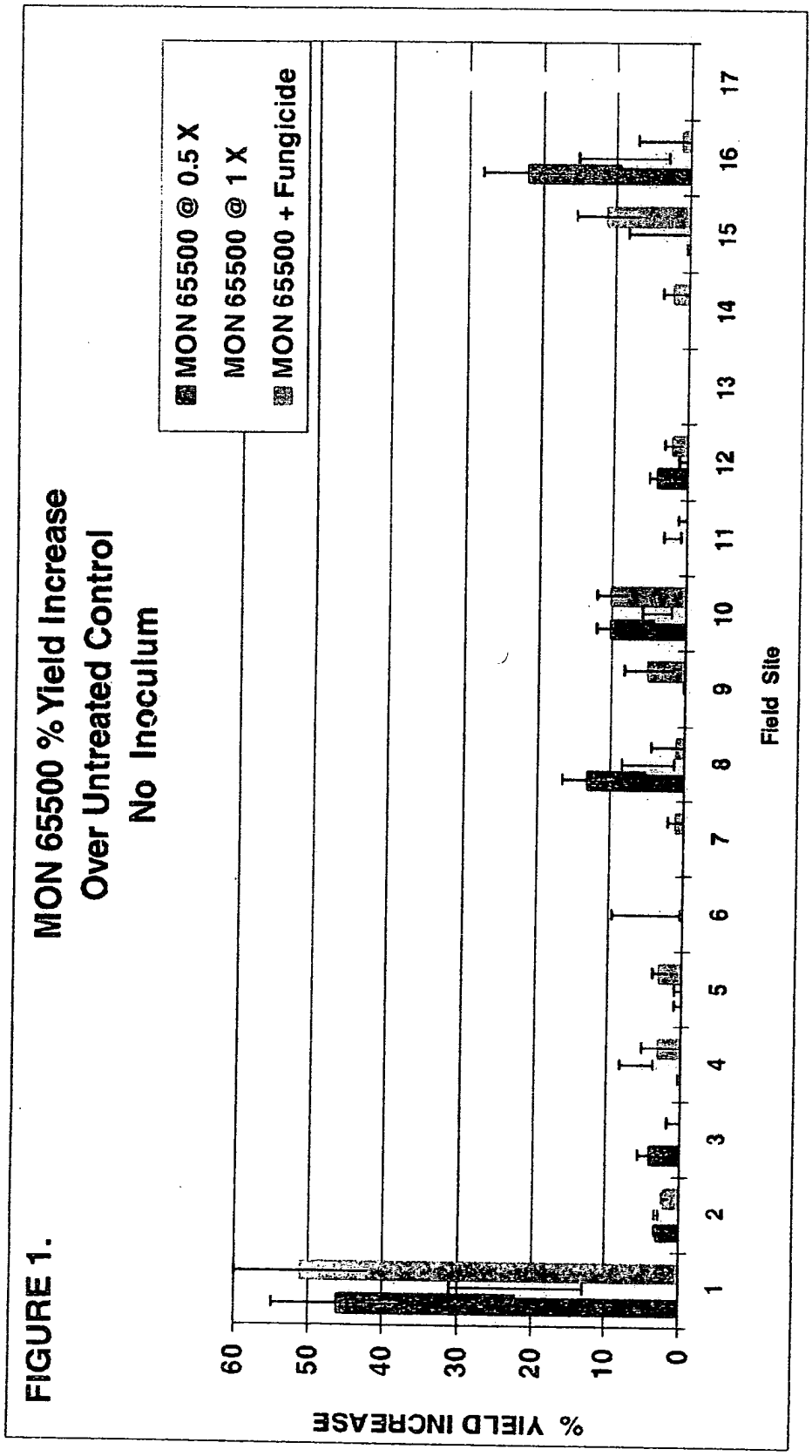

FIGURE 1.

Wednesday, June 16, 2004.jpg

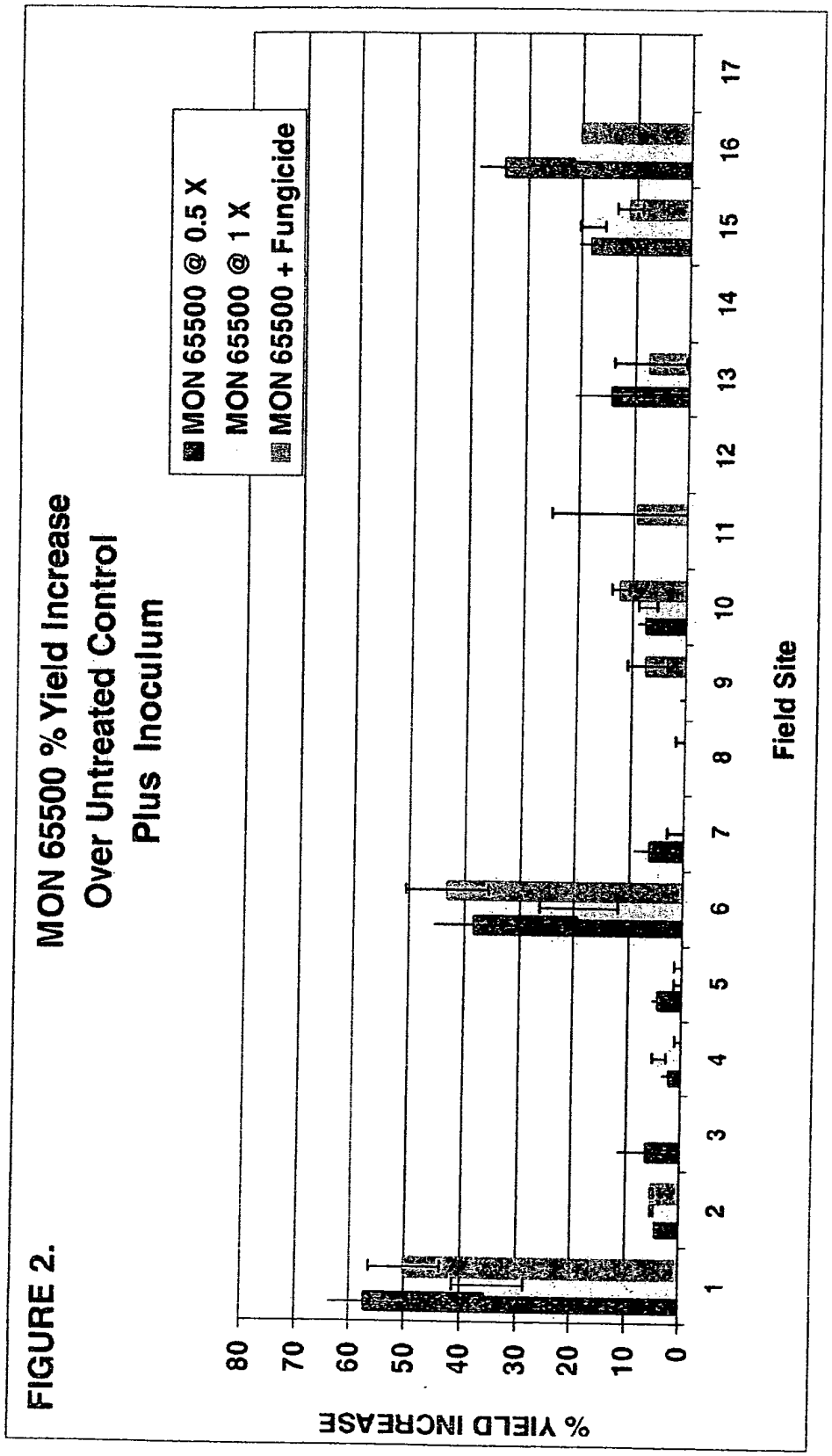

FIGURE 2.

Wednesday, June 16, 2004 (2).jpg

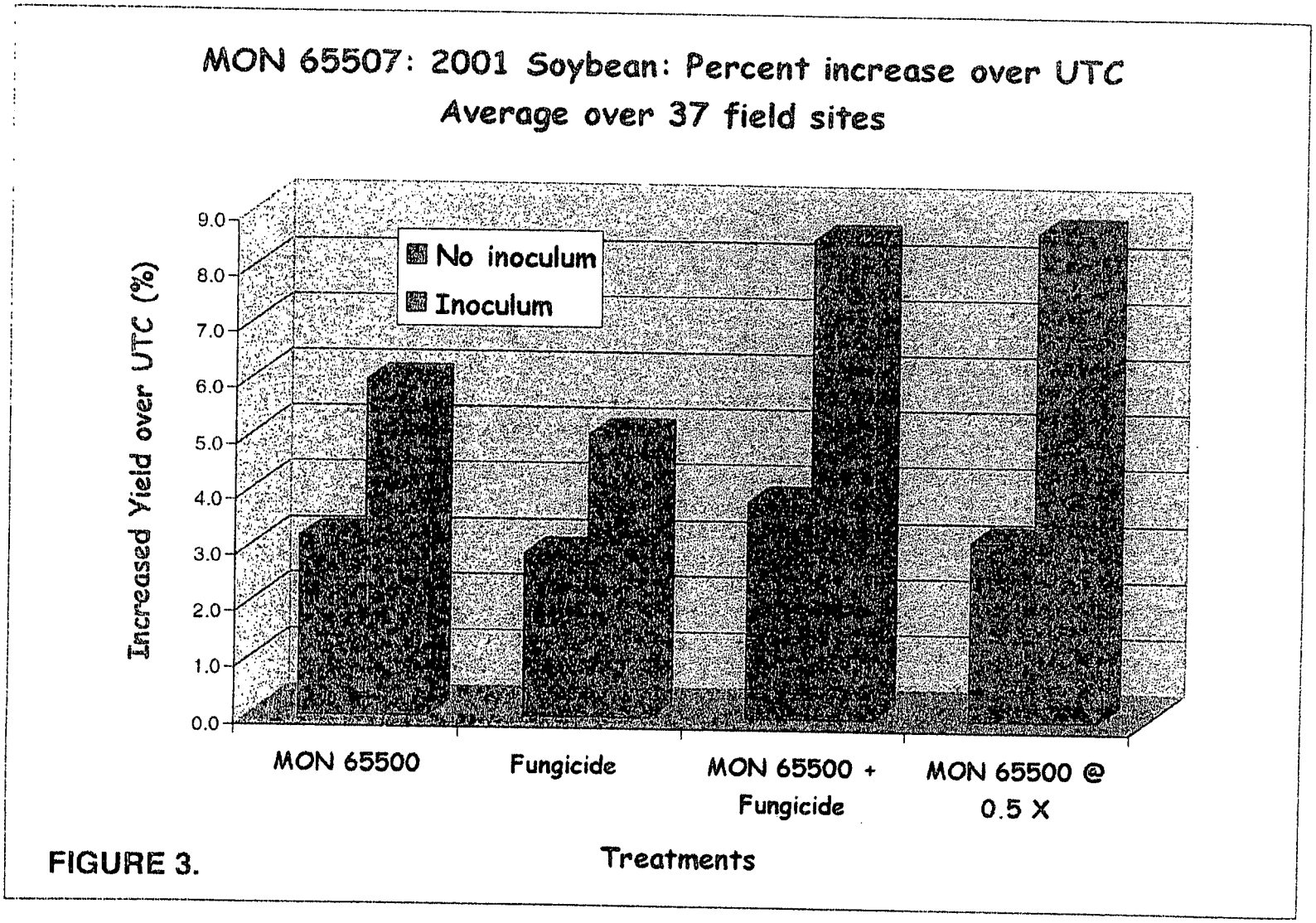

FIGURE 3.